

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) ~~Method~~ A method for three-dimensionally determining ~~the~~ a refractive index of a transparent or partially transparent ~~layer~~ layers via transmission ellipsometrie, comprising: wherein
inserting the layer in an immersion medium which has a higher refractive index than air;
irradiating the layer is irradiated with polarised light at different angles of incidence; and , ~~and wherein~~
measuring and evaluating variations in the polarisation of the light are ~~measured and evaluated~~ as the light passes through the layer , ~~characterised in that the measurement is carried out through an immersion medium which has a higher refractive index than air, and between which the layer is inserted.~~
2. (Currently Amended) ~~Method~~ A method according to ~~Claim 1, characterised in that~~ claim 1, further comprising applying the layer is applied to a transparent substrate, wherein the measuring is ~~and is measured~~ on the substrate.
3. (Currently Amended) ~~Method~~ A method according to ~~Claim 2,~~ characterised in that claim 2, further comprising using a refractive index of the an immersion medium is ~~used with a refractive index~~ which ~~[[is]]~~ at least corresponds approximately to a refractive index of the substrate.
4. (Currently Amended) ~~Method~~ A method according to ~~Claim 1,~~ characterised in that claim 1, further comprising inserting a liquid immersion medium into a chamber, wherein the measuring is in the chamber. the layer is ~~measured in a chamber into which is inserted a liquid immersion medium.~~

5. (Currently Amended) ~~Method~~ A method according to ~~Claim 1,~~
~~characterised in that claim 1, further comprising forming~~ the immersion medium
is formed by with two solid body halves between which the layer is inserted.
6. (Currently Amended) ~~Method~~ A method according to ~~Claim 5,~~
~~characterised in that claim 5, further comprising using~~ two hemispheres or hemi-
cylinders ~~are used~~ as the immersion medium.
7. (Currently Amended) ~~Method~~ A method according to ~~Claim 6,~~
~~characterised in that claim 6, further comprising supporting~~ the two hemispheres
or hemi-cylinders ~~are supported by~~ with capillary forces on the layer and the
substrate.
8. (Currently Amended) ~~Method~~ A method according to ~~Claim 1,~~
~~characterised in that claim 1, further comprising determining a complex refractive~~
~~index by irradiating~~ the layer is ~~irradiated~~ simultaneously or consecutively with
light of different wavelengths ~~in order to determine the complex refractive index.~~
9. (Currently Amended) ~~Method~~ A method for ~~according to Claim 1 for~~ measuring
~~layers~~ layers for flat screens, optical data storage or optical wave guides
comprising: utilizing the method according to claim 1.
10. (Currently Amended) ~~Device~~ A device for carrying out the method according to
~~Claim 1, claim 1, comprising:~~
with a transmission measuring device for measuring a variation in
polarisation as ~~the~~ polarised light passes through a sample; and
a rotating device for rotating the sample, ~~characterised in that wherein the~~
rotating device comprises:
an immersion medium which has a higher refractive index than air,
and
a support for the immersion medium is ~~provided and is designed~~ so
that the sample ~~can be inserted~~ is insertable within ~~between~~ the
immersion medium and ~~can be rotated~~ the sample is rotatable in or
with the immersion medium relative to a beam axis of the
polarised light.

11. (Currently Amended) ~~Device~~ A device according to ~~Claim 10~~,
~~characterised in that claim 10, wherein~~ the support is comprises a chamber for a
liquid immersion medium, ~~which has~~ the chamber having inlet and outlet surfaces
for the polarised light.
12. (Currently Amended) ~~Device~~ A device according to ~~Claim 11~~,
~~characterised in that claim 11, wherein~~ the chamber comprises ~~is designed in~~ a
cylindrical shape and is connected to the rotating device so that ~~it can be rotated~~
the chamber is rotatable ~~by means of~~ the rotating device.
13. (Currently Amended) ~~Device~~ A device according to ~~Claim 10~~,
~~characterised in that claim 10, wherein~~ the support ~~is designed for receiving~~ is
connected to the rotating device, wherein the support receives and fixing ~~fixes~~
two solid body halves, the two solid body halves forming the immersion medium
~~and is connected to the rotating device.~~